

Tumbling Instructions



TB-12



TB-22



TB-14

SAFETY GUIDELINES

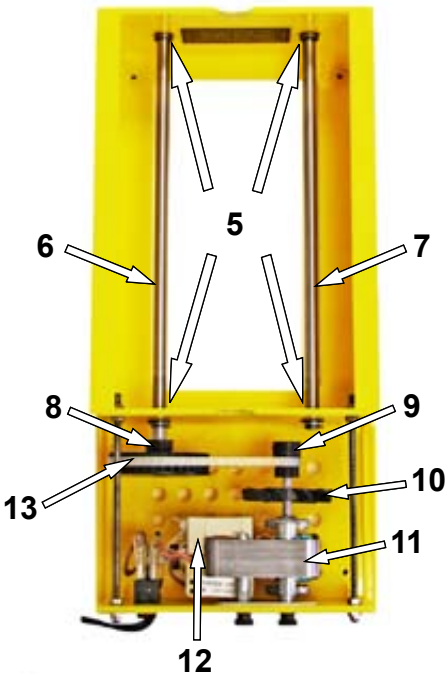
- 1) Read this entire manual before first operating your Tumble-Bee.**
- 2) Do not use your Tumble-Bee in wet conditions or around flammable gases or liquids. The Tumble-Bee is built to work in clean, dry, room temperature conditions only.**
- 3) Do not leave children unattended with the Tumble-Bee. Always make sure to have a responsible adult supervising children at all times.**
- 4) Do not abuse your cord. Carrying a tool by the cord or yanking the cord to disconnect from a receptacle may cause your cord to break. Keep all cords away from heat, oil and sharp edges at all times.**
- 5) Never overload the Tumble-Bee. This not only puts strain on the motor but won't give you the results intended. Use appropriate quantities that don't exceed the tumbler's capacity.**
- 6) Turn your Tumble-Bee motor off for servicing before removing the black motor cover.**
- 7) When emptying and cleaning your barrel, never pour the slurry down the drain. The slurry hardens like a rock and can clog your drain.**

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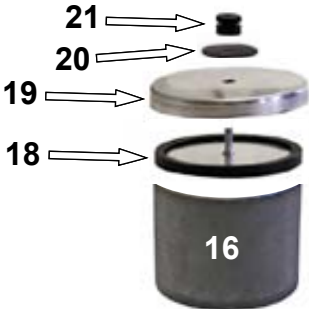
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Machine Details

What you see below is everything you will find with your Tumble-Bee. Tumbling material and abrasives can be found at your local rock shop or online. If you need extra parts for your Tumble-Bee, you can order on our website at www.tumble-bee.com. For speciality parts, e-mail info@tumble-bee.com for further assistance.



PART #	Description
1	Plastic Housing
2	Motor Cover
3	On/Off Switch
4	Thumb Screws
5	Bearings
6	Drive Shaft
7	Support Shaft
8	Drive Pulley
9	Motor Pulley
10	Fan
11	Motor
12	Thermal Overload Protection
13	Timing Belt
14	Oil
15	Pulley Wrench
16	2 lb. Barrel
17	4 lb. Barrel
18	Inner Lid
19	Outer Lid
20	Washer
21	Barrel Nut



2 barrels for TB-22
1 barrel for TB-12

1 barrel for TB-14

Operating Instructions

1) Location: Your Tumble-Bee will be operating all 24 hours of the day so choose a convenient location for your tumbler with an electrical outlet nearby. We recommend a location at room temperature on a flat, clean surface with at least 6" clearance around the motor to provide proper ventilation. Be sure not to put your Tumble-Bee with other valuables as a spill could happen.

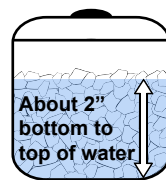


Helpful Hint: Place your Tumble-Bee in a large pan so if the barrel spills open while tumbling, your material is in one place.

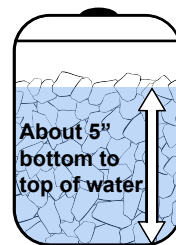
2) Open the Barrel: To open the barrel, simply unscrew the black barrel nut turning counter-clockwise and remove the black washer. Next, remove the silver outer lid by inserting the black washer inbetween the silver outer lid and barrel, moving the washer in an up and down motion. This will allow the silver outer lid to pop off. Remove the inner lid by lifting it by the center bolt.



3) Add your Material: Once you have figured out what material you will be tumbling, add 1/2 (minimum) to 2/3 (maximum) of that material to your barrel. Do not overfill the maximum. Add clean water to the barrel, just enough to barely cover the top layer of your material.



2 lb. barrel



4 lb. barrel



Helpful Hint: Do not add too much water to your barrels or your material will not tumble effectively.

4) Add your Abrasive: The abrasives you use depends on the material you are tumbling. Be sure to get the right abrasives for your material at your local rock shop. Follow the instructions on the abrasives for the correct quantity to add to the tumbler or refer back to pages 11,12,13 for average tablespoon quantities.

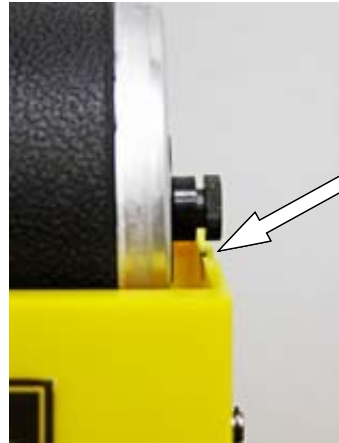


Overloading: The max tumbling weight including the barrels, material and water is 6 lbs.,10 oz. Overloading will cause motor to overheat.

Operating Instructions

5) Close the Barrel: Wipe the inner lid of your barrel clean with a damp cloth so the inner and outer lids go back on a clean surface. Place the inner lid back in the barrel so there's a snug fit. Place the silver outer lid on top of the inner lid so that the center bolt is sticking out of the middle and the edge of the lid is flush with the side of the barrel. Place the black washer on top and screw on the black barrel nut, turning clockwise. Make sure this is very tight so it won't spin loose. Spin your barrel around to test for any leaks.

6) Time to Tumble: It's time to start tumbling. If this is your first time tumbling with the Tumble-Bee, manually rotate the drive shaft and support shaft. **Oil the motor bearings before tumbling for the first time.** A few drops is all you need but be sure to clean up any excess. If you are not sure where the motor bearings are, refer to the image on page 7. Please note, when turned on it is normal for your tumbler to be hot to the touch and make noise. Place your barrel on the two shafts and make sure the groove in the black knurled nut rests over the barrel guide. Plug your Tumble-Bee into an outlet and turn your tumbler on using the on/off switch. Your barrel should be rotating at this point. If it's not, you can manually spin the barrel as a kick start. Follow the directions on your abrasives to know how long to tumble with each grit.



Nut groove
rests over
barrel guide

 **Helpful Hint:** If this is your first time with the Tumble-Bee, keep a close eye on your tumbler to make sure everything is working properly. In general, you should check your tumbler once a day to make sure there is no spill and to make sure your material is coming along properly.

7) Changing the Abrasive: Open the barrel and pour your tumbling material in a bucket or strainer and rinse it with clean water. Inspect your material. Rough edges should start to wear down and a polish should start appearing with each step used in the abrasive sequence. Put the inspected material back in your barrel with the correct abrasive and close your barrel.



Operating Instructions



Helpful Hint: Keep a log of your tumbling progress. By doing so, it can be a useful reference for when you tumble similar material in the future.

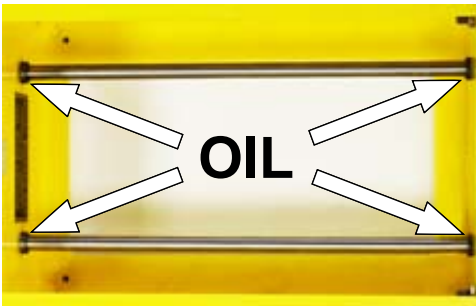
8) Restart Tumbling: Before you start tumbling with the next abrasive, clean and oil the bearings. Simply wipe your bearings with a clean cloth to collect any dust that may build-up while tumbling. Then oil your bearings, about a few drops should suffice. Do this every time you change abrasives to keep your Tumble-Bee tumbling properly. Once you have cleaned and oiled the bearings, turn your power switch on and start tumbling.

Care & Maintenance

The Tumble-Bee is manufactured to operate 24 hours a day, 7 days a week. With proper care and maintenance, your tumbler will tumble for years.

Barrel Exterior & Interior: Your barrels may form a dust while tumbling. It is important to keep the outside and inside of your barrel clean to protect the rubber and to keep a clean unit. Simply wipe the outside and inside of your barrel with a wet, soapy cloth in-between grit changes. Rinse the soap off with clean water. These barrels aren't suitable for a dishwasher or harsh cleaning solvents.

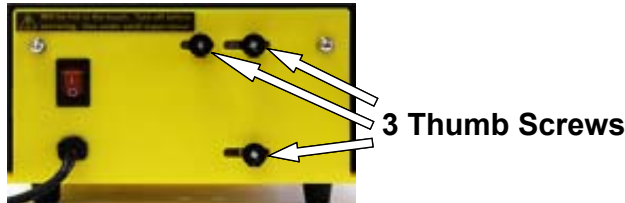
Bearings: Before you start your very first tumble with the Tumble-Bee, oil your four bearings. After that, oil every time you change your grit. The oil that comes with the Tumble-Bee is a motor oil so you will need to oil your bearings more frequently. Also, clean your bearings with a clean cloth to pick-up any dust that may build-up while tumbling in-between grit changes.



Helpful Hint: You can use store bought 10W30 motor oil. **Do not** use spray on lubricants.

Care & Maintenance

Motor: The black motor cover is designed to push on and pull off so don't carry your Tumble-Bee by the black motor cover. Every time you re-align either pulley or belt, tighten the black thumb screws which tightens the motor, turning clockwise. Always do this to prevent motor problems.



 **Safety Note:** After continuous use, the Tumble-Bee motor may become hot. If the motor over-heats, it is protected with a thermal overload device so the unit will automatically shut off. If this happens, let the motor completely cool off. The motor will restart on its own. Overheating is often a sign of exceeding weight limits.

Belt: The non-slip timing belt on your tumbler is an industry leading design. It comes pre-aligned but if you need to adjust it, simply adjust both pulleys that hold the belt using the silver hex wrench that came with your Tumble-Bee. Once both pulleys are adjusted and your belt is straight and tight, make sure your pulley is tight by turning your hex wrench clockwise. Misaligning the pulley will result in belt failure. Be sure not to over-tighten your belt or this can result in a motor bearing failure.



 **Helpful Hint:** Depending on the tightness of your belt, the tumbler will spin at 59-60RPM.

Trouble Shooting

If you have questions regarding your Tumble-Bee, check on this page to see if we can answer them. If your question is not on here and you need further assistance, please e-mail info@tumble-bee.com.

My barrel isn't moving on the shafts.

If your barrel isn't moving, take the barrel off the shafts and make sure the support shaft is spinning freely. This is the main cause of rotation problems. Clean and oil the support shaft until it spins properly. If it is, put the barrel back on the shafts and spin the barrel manually, giving your tumbler a "kick- start." If it is still not moving, the material you are tumbling is too heavy. Remove some of the material so your barrels rotate properly. Remember not to exceed the capacity limit of 2/3 full.

My belt won't spin.

This can be caused by the motor position being too far to the right causing too much tension on the belt. Loosen the black thumbscrews and move the motor so the belt is loose. If the motor still doesn't spin, then test the motor without the belt. If it's still not spinning, then the motor should be replaced.

My inner lid won't seal correctly.

Be sure to wipe the inner lid and the edge of your barrel clean so material isn't getting in the way of sealing the inner lid. Your inner lid should sit correctly on the barrel.

My motor and belt spin but the drive shaft doesn't.

You need to tighten the drive pulley. To do this, tighten the set screw that is on the drive pulley with the allen wrench you received with your Tumble-Bee.

My belt is loose.

Adjust the motor following the instructions on page 8. There needs to be adequate tension but don't tighten the belt too tight or the motor won't spin.

My barrel leaked.

This could stem from two reasons. Either the lids weren't sealed properly or there was a gas build-up in your barrel. Depending on the material you are tumbling, a chemical reaction could occur and form a gas inside your barrel. This gas can fill up inside the barrel and cause the lid to pop off, thus spilling the insides. Make a good habit of checking your material daily so you can relieve that gas build up when you open the barrel for inspection.

My tumbler is noisy.

In general, tumbling is a noisy process and our non-slip timing belt design will be slightly louder than the less efficient O-ring design. However, the tumbler noise (buzz) can be somewhat dampened by adjusting the tension on the timing belt. You can loosen the motor thumbscrews and put some slack onto the belt, but make sure not to do too much or else the belt will not properly fit into the grooved pulleys. Also, always make sure everything is properly lubricated.

Introduction to Tumbling

For millions of years, our earth has naturally tumbled stones of all different material through waves of our oceans and rivers. The natural movement of the waves and sand produced beautiful, polished rocks without a machine. Now **YOU** can control this natural process with your Tumble-Bee tumbler.

Welcome to Rock Tumbling. An addicting hobby that the whole family can enjoy together while have fun doing. Tumbling is the best way to spark your interest in lapidary. Whether you are a beginner or professional, rock tumbling is something for everyone to enjoy at every level and age. Just like every new hobby, there are some basics you need to know before you jump right in. The rest of this section explains the general knowledge of rock tumbling and what material you can successfully tumble with. For a better understanding about what grits to use with the appropriate material, we suggest asking your local rock shop. All abrasive kits come with instructions. Also, searching the internet and experimentation will help further your understanding.

Before you start tumbling, you need to know the Mohs Scale. The Mohs Scale of mineral hardness will help you determine what material can be successfully tumbled together. As a general rule, always tumble material of the same hardness. If you don't you can end up scratching your material. If you are not sure of the hardness of your material, you can always conduct a hardness test.

MOHS SCALE

- 1. TALC
- 2. GYPSUM
- 3. CALCITE
- 4. FLUORITE
- 5. APATITE
- 6. ORTHOCLASE
- 7. QUARTZ
- 8. TOPAZ
- 9. CORUNDUM
- 10. DIAMOND

SOFTEST



HARDEST

HARDNESS SCRATCH TEST

- Fingernail Scratch.....2 - 2.5
- Pennies Scratch.....3
- Knifeblade Scratch.....5.5
- Window Glass Scratch.....5.5
- Steel File Scratch.....6.5
- Garnet Scratch.....7 - 7.5
- Carborundum Scratch.....9.5

Introduction to Tumbling Stones

General Information for Tumbling Stones:

Before you begin tumbling gemstones, you must know what gemstones to tumble together. Always follow the Mohs Scale. If you are tumbling softer stones (usually those below 6 on the hardness scale) don't add harder stones to the mix. Select stones that are around the same size that have colors and patterns that appeal to you. If you have stones that have deep cracks or are fractured, discard them. More than likely, your rock tumbler won't be able to help these misfit stones. Be sure to check your stones daily.

There is a basic formula for tumbling stones for both 2 lb. barrels and 4 lb. barrels:

Step	Media	Quantity	Time
1	Coarse Silicon Carbide Grit 60/90	2lb. = 3 tbsp / 4lb. = 6 tbsp	1 week minimum
2	Medium Silicon Carbide Grit 120/220	2lb. = 3 tbsp / 4lb. = 6 tbsp	1 week
3	Fine Silicon Carbide Grit 500/600	2lb. = 3 tbsp / 4lb. = 6 tbsp	1 week
4	Polish	2lb. = 3 tbsp / 4lb. = 6 tbsp	5-7 days

Fill your barrel with clean water to barely reach the top layer of rocks. **Do not overfill with water or your rocks will not tumble effectively.** If you see that grit is left-over in the barrel when you remove your stones, reduce your tablespoon amount. Adding more grit to your stones will **NOT** shorten the tumbling process or tumble your stones faster, it will just waste your grit.



Helpful Hint: The polish you use depends on what material you are polishing. Most people use Cerium Oxide, Aluminum Oxide or TXP Aluminum Oxide for polish.

You can add steps as you go along. Remember, practice and experimentation are keys to success.



Helpful Hint: You must have patience! Do not rush the sequence. If you do, you will most likely not get the results you want.



Polished Gemstones

Introduction to Tumbling Glass

General Information for Tumbling Glass:

Since glass is much softer than most rocks on the Mohs Scale, it will take less time to tumble. Glass has a hardness between 5 and 6 so you will need to reduce your tumble time significantly. Tumbling glass is one of the more challenging materials to tumble. Since it is softer, particles may break off while tumbling. Be sure to fill the barrel with the right amount of material. Some use large ceramic pellets to fill the barrel to prevent the glass from breaking. Remember to follow your abrasive kit instructions closely to avoid broken glass.



Helpful Hint: Ceramic pellets are used as a filler for tumbling glass. It's made to give your glass a cushion to prevent the glass from breaking while tumbling. If you are using ceramic pellets, be sure to use pellets that you have previously used. Using brand new ceramic pellets may scratch your glass because they often have sharp edges.

There is a basic formula for tumbling glass for both 2 lb. barrels and 4 lb. barrels:

Step	Media	Quantity	Time
1	Coarse Silicon Carbide Grit 60/90	2lb. = 3 tbsp / 4lb. = 6 tbsp	4-5 days
2	Medium Silicon Carbide Grit 120/220	2lb. = 3 tbsp / 4lb. = 6 tbsp	2-3 days
3	Fine Silicon Carbide Grit 500/600	2lb. = 3 tbsp / 4lb. = 6 tbsp	3 days
4	Polish	2lb. = 2 tbsp / 4lb. = 4 tbsp	4-7 days



Helpful Hint: For the polishing process, we recommend using TXP Aluminum Oxide. It produces a higher luster than most polishes. You can also use Cerium Oxide or #61 Rapid Polish.

You can add steps as you go along. Some people prefer using beach sand instead of the silicon carbide grit for tumbling glass. If you choose this route, sand will require more days of tumbling than the silicon carbide grit. Experiment for best results.



Polished Glass

Introduction to Tumbling Brass & Metal

General Information for Tumbling Brass & Metals:

Many people polish their jewelry, coins, cartridge cases and remove burrs from bullet casings with their tumbler. Polishing your metal items will give you a high-polish finish without the loss of your metal. There are many different techniques for tumbling brass and metal.



Helpful Hint: If you are polishing valuable jewelry, it's a good idea to ask a professional jeweler permission to tumble. Some jewelry can be ruined using the tumbler. **NEVER** tumble jewelry that has gems or stones.

There is a basic formula for polishing jewelry and metals for both 2 lb. barrels and 4 lb. barrels:

Media	Quantity	Time
Stainless Steel Shot	Approx. 1 lb.	Tumble media w/ jewelry for 15-30 mins. Tumble longer if needed.
Clean Water, Chlorine Free	Cover jewelry & steel shot	
Burnishing Soap/Mild Dishwashing Detergent	1-2 drops	



Helpful Hint: Once you are done tumbling with your stainless steel shot, dry completely and store. You can re-use your stainless steel shot more than once.

This process will brighten your rings, earrings, chains, sterling silver, gold, precious metals and other pieces of jewelry you have.



Helpful Hint: Some people tumble loaded ammo. Please note that this is a dangerous process and is not recommended. Tumbling loaded ammo can break down the powder that may cause extreme pressure problems.



Polished Bullet Casings

One Year Limited Warranty

Your Tumble-Bee is warranted by Reentel International Inc. to be free from defect for the one full year from the date of your purchase.

What does this warranty cover?

This warranty covers the motor, barrels and belt of your Tumble-Bee.

What doesn't this warranty cover?

This warranty doesn't cover problems resulting from any abuse, misuse, intentional damage, incorrect usage, failure to adequately take care of your Tumble-Bee or improperly following the instructions. It also doesn't cover rusty motors, as this is a result from water getting into the motor which should never occur if used properly.

Who is covered under this warranty?

This warranty covers the original purchaser of the equipment. This warranty is nontransferable.

What is the warranty period?

This warranty is in force for one full year from the date of your purchase. Please retain this book for your records.

Who should I contact if I need warranty service?

Contact warranty@tumble-bee.com directly and we will provide you a solution for your problem. Shipping to us will be at your expense. If your problem is determined to be under warranty, we will pay for return shipping.

Manufactured by:

Reentel International Inc., 808 Burr Oak Dr., Westmont IL. 60559, USA

Next Steps...

Now that you have mastered tumbling, quicken the grinding and polishing process by using Hi-Tech Diamond equipment. Hi-Tech Diamond offers a full line of saws to cut rocks to shape and lapping machines that allow you to grind and polish in minutes. To learn more, visit www.HITECHDIAMOND.com.



6" Trim Saw



All-U-Need



Slant Cabber



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Also, check out the CabKing, the ultimate grinder and polisher. This all inclusive machine will allow you to unleash your creativity and take it to another level. For more information, visit www.CABKING.us.



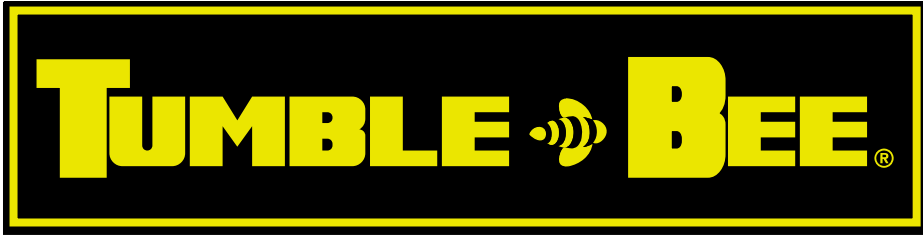
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